

What is claimed is:

- 1           1.     A method comprising:  
2                     determining a timing relationship between a video window and a capture  
3 raster, wherein the video window is within a display raster; and  
4                     adjusting a pixel clock to avert shear of the video window.
- 1           2.     The method of claim 1, further comprising:  
2                     determining that the video window is within the timing of the capture  
3 raster; and  
4                     quickly moving image shear out of the video window.
- 1           3.     The method of claim 1, further comprising:  
2                     determining that the video window is not fully within the timing of the  
3 capture raster; and  
4                     setting the pixel clock to cause the display raster to drift slowly.
- 1           4.     The method of claim 3, further comprising:  
2                     setting a color burst generator to phase-lock within the display raster.
- 1           5.     The method of claim 4, setting a color burst generator to phase-lock within  
2 the display raster further comprising setting the color burst generator to a predetermined  
3 nominal setting.
- 1           6.     The method of claim 2, quickly moving image shear out of the video  
2 window further comprising:  
3                     determining that the video window is later than the capture raster; and  
4                     adjusting the pixel clock to quickly retard the display raster.
- 1           7.     The method of claim 6, further comprising:

2 adjusting a color burst generator to maintain a viewable image on the  
3 display raster.

1 8. The method of claim 7, further comprising:  
2 retrieving frequency error information from a table of predetermined  
3 phase-locked loop parameters; and  
4 calculating a color burst adjustment using the frequency error information.

1 9. The method of claim 2, quickly moving image shear out of the video  
2 window further comprising:  
3 determining that the video window is earlier than the capture raster;  
4 adjusting the pixel clock to quickly advance the display raster; and  
5 adjusting a color burst generator to maintain a viewable image on the  
6 display raster.

1 10. The method of claim 3, setting the pixel clock to cause the display raster  
2 to drift slowly further comprising:  
3 determining that the pixel clock is quickly advancing the display raster;  
4 and  
5 setting the pixel clock to slowly advance the display raster.

1 11. The method of claim 3, setting the pixel clock to cause the display raster  
2 to drift slowly further comprising:  
3 determining that the pixel clock is quickly retarding the display raster; and  
4 setting the pixel clock to slowly retard the display raster.

1           12.    The method of claim 1, further comprising determining a capture raster  
2   scan line number.

1           13.    The method of claim 12, further comprising determining a display raster  
2   scan line number.

1           14.    The method of claim 13, further comprising:  
2                   determining a capture raster field polarity; and  
3                   determining a display raster field polarity.

1           15.    The method of claim 1, determining a timing relationship between a video  
2   window and a capture raster further comprising:  
3                   periodically monitoring the capture raster and the display raster.

1           16.    The method of claim 15, wherein the monitoring period is not an exact  
2   multiple of a field time.

1           17.    The method of claim 1, adjusting a pixel clock to avert shear of the video  
2   window further comprising:  
3                   identifying a vertical retrace period; and  
4                   invoking an interrupt service routine to adjust the pixel clock.



1           22.    The method of claim 19, determining that the timing relationship between  
2 the video window and the capture raster is above a predetermined threshold further  
3 comprising:  
4                   determining a rate of drift between the capture raster and the display  
5 raster.

1           23.    The method of claim 22, determining a rate of drift between the capture  
2 raster and the display raster further comprising:  
3                   sampling a first indicator of the capture raster;  
4                   sampling a second indicator of the display raster;  
5                   differencing the first indicator from the second indicator to produce a  
6 result; and  
7                   comparing the result with a previously calculated result to produce a  
8 difference of differences.

1           24.    The method of claim 23, further comprising averaging the difference of  
2 differences with previously stored difference of differences.

1           25.    The method of claim 18, further comprising:  
2                   retrieving frequency error information from a table of predetermined  
3 phase-locked loop parameters.

1           26.    The method of claim 25, retrieving frequency error information from a  
2 table of predetermined phase-locked loop parameters further comprising:  
3                retrieving an upper parameter, a middle parameter, and a lower parameter  
4 from a group of neighboring phase-locked loop parameters within the table; and  
5                designating the middle parameter as a default setting.

1           27.    A method comprising:  
2                determining a timing relationship between a video window and a capture  
3 raster, wherein the video window is within a display raster;  
4                adjusting a pixel clock to avert shear of the video window; and  
5                adjusting the pixel clock to maintain a shear-free display of the video  
6 window.

1           28.    The method of claim 27, adjusting the pixel clock to avert shear of the  
2 video window further comprising:  
3                monitoring the timing relationship between the display raster and the  
4 capture raster, wherein the monitoring is performed at a first frequency.

1           29.    The method of claim 28, adjusting the pixel clock to maintain a shear-free  
2 display of the video window further comprising:  
3                monitoring the timing relationship between the display raster and the  
4 capture raster, wherein the monitoring is performed at a second frequency.

1           30.    The method of claim 29, further comprising:  
2                monitoring the timing relationship between the display raster and the  
3 capture raster, wherein the first frequency is greater than the second frequency.

1           31.    An article comprising a medium storing instructions for enabling a system  
2 to:  
3                calculate a timing relationship between a video window and a capture  
4 raster, wherein the video window is within a display raster; and  
5                adjust a pixel clock to avert shear of the video window.

1           32.    The article of claim 31, wherein the instructions further enable the system  
2 to:  
3                determine that the video window is within the timing of the capture raster;  
4 and  
5                quickly move image shear out of the video window.

1           33.    The article of claim 31, wherein the instructions further enable the system  
2 to:  
3                determine that the video window is not within the timing of the capture  
4 raster; and  
5                set the pixel clock to cause the display raster to drift slowly.

1           34.    The article of claim 33, wherein the instructions further enable the system  
2 to:  
3                set a color burst generator to phase-lock to the display raster.

1           35.    The article of claim 34, wherein the instructions further enable the system  
2 to:  
3                set the color burst generator to a predetermined nominal setting.

1           36.    The article of claim 31, wherein the instructions further enable the system  
2    to:  
3               determine that the video window is later than the capture raster; and  
4               adjust the pixel clock to quickly retard the display raster.

1           37.    The article of claim 36, wherein the instructions further enable the system  
2    to:  
3               adjust a color burst generator to maintain a viewable image on the display  
4    raster.

1           38.    The article of claim 33, wherein the instructions further enable the system  
2    to:  
3               determine that the video window is before the capture raster;  
4               adjust the pixel clock to quickly advance the display raster; and  
5               adjust a color burst generator to maintain a viewable image on the display  
6    raster.

1           39.    The article of claim 33, wherein the instructions further enable the system  
2    to:  
3               determine that the pixel clock is quickly advancing the display raster; and  
4               set the pixel clock to slowly advance the display raster.



1           40.     The article of claim 33, wherein the instructions further enable the system  
2     to:  
3                 determine that the pixel clock is quickly retarding the display raster; and  
4                 set the pixel clock to slowly retard the display raster.

1           41.     An article comprising a medium storing instructions for enabling a system  
2     to:  
3                 determine a timing relationship between a video window and a capture  
4     raster, wherein the video window is within a display raster; and  
5                 adjust a pixel clock to maintain a shear-free display of the video window.

1           42.     The article of claim 41, further storing instructions for enabling a system  
2     to:  
3                 determine that the timing relationship between the video window and the  
4     capture raster is above a predetermined threshold; and  
5                 set the pixel clock to slowly retard the display raster.

1           43.     The article of claim 41, further storing instructions for enabling a system  
2     to:  
3                 determine that the timing relationship between the video window and the  
4     capture raster is below a predetermined threshold; and  
5                 set the pixel clock to slowly advance the display raster.

1           44.     The article of claim 41, further storing instructions for enabling a system  
2 to:  
3                   determine that the timing relationship between the video window and the  
4 capture raster is within a predetermined range; and  
5                   not adjust the pixel clock.

1           45.     The article of claim 42, further storing instructions for enabling a system  
2 to:  
3                   determine a rate of drift between the capture raster and the display raster.

1           46.     The article of claim 45, further storing instructions for enabling a system  
2 to:  
3                   sample a first indicator of the capture raster;  
4                   sample a second indicator of the display raster;  
5                   difference the first indicator from the second indicator to produce a result;  
6 and  
7                   compare the result with a previously calculated result to produce a  
8 difference of differences.

1           47.     The article of claim 46, further storing instructions for enabling a system  
2 to:  
3                   average the difference of differences with previously stored difference of  
4 differences.

1           48.    An article comprising a medium storing instructions for enabling a system  
2   to:  
3                determine a timing relationship between a video window and a capture  
4   raster, wherein the video window is within a display raster;  
5                adjust a pixel clock to avert shear of the video window; and  
6                adjust the pixel clock to maintain a shear-free display of the video  
7   window.

1           49.    The article of claim 48, further storing instructions to enable a system to:  
2                monitor the timing relationship between the display raster and the capture  
3   raster, wherein the monitoring is performed at a first frequency.

1           50.    The article of claim 49, further storing instructions to enable a system to:  
2                monitor the timing relationship between the display raster and the capture  
3   raster, wherein the monitoring is performed at a second frequency.

1           51.    The article of claim 50, further storing instructions to enable a system to:  
2                monitor the timing relationship between the display raster and the capture  
3   raster, wherein the first frequency is greater than the second frequency.